Season's Greetings

American Engineer

DECEMBER 1947

VOLUME 17 NUMBER 12

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

GOVERNOR THOMAS E. DEWEY

Governor Thomas E. Dewey's Greeting To Thirteenth Annual NSPE Meeting

AS Governor of the State of New York, I am happy to welcome the National Society of Professional Engineers to Buffalo for its annual convention.

For generations the American people have enjoyed a standard of living unsurpassed by those of any other nation in the world. Little by little the burdensome yoke of manual labor has been lifted from the shoulders of the housewife, the mechanic, the laborer, by the advent of new mechanical equipment.

Community life has been enhanced by the creation of modern systems of public utilities which have made our cities cleaner, brighter, more pleasant places in which to live. Commerce, industry, agriculture and the individual citizen have flourished because of the unexcelled transportation and communication systems which have been developed throughout the years.

Homes are more attractive, more comfortable, more durable because of improvements in the manufacture of building materials, furnishishings and equipment. Food and clothing are more abundant because of the continuing and relentless march of progress for which this Nation has become famed.

These, and countless other benefits, are ours today because of the efforts of that vast army of men who proudly bear the title of Professional Engineer. Within that general grouping are the Civil Engineers who have been responsible for the design and construction of our water supply systems, our highways, bridges, railways, airports, improved waterways and countless other facilities which now seem so common place and which we have come to take for granted. There are the Sanitary Engineers, Electrical Engineers, Mechanical Engineers, Chemical Engineers and others, all of whom are planning, thinking, building for a better America.

Their peacetime efforts have been dedicated continuously to the welfare of all the people. In time of national emergency it has been their genius which has made possible the creation of equipment and facilities which have enabled our fighting men to vanquish those who would rob us of our freedom and reduce this nation to one of serfdom.

America needs Professional Engineers and I am happy that New York State has long been a leader in promoting high standards for those who may rightly use that title. In this State we have established strict educational requirements for the attainment of the professional status which the true engineer now enjoys.

I am confident that the annual convention of the National Society of Professional Engineers will be most fruitful. My very best wishes for a most enjoyable meeting.

Sincerely yours,

Thomas E. Dewey

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EDITORIAL

Thoughts on Christmas

Nineteen Hundred Forty Eight years ago on Christmas Day a baby was born under the star of Bethlehem in a manger—and the great and powerful and the meek and humble from near and far came bearing gifts to lay at His feet.

Thus was the Son of God received on earth. God had sent His most prized possession—His only Son—to redeem man. He was making a sacrifice in order that man might learn by His example to sacrifice for His greater glory.

The anniversary of Christmas day is celebrated each year. It is, in our modern world, a time for giving gifts and renewing old acquaintances. It is a time for celebration and for joy.

But more important, it is a time for reflection. It is a time to recall the great love which our Creator bears us—a love so great that He would sacrifice His only Son to redeem us. It is a time to reexamine and reevaluate our stewardship of that love and that redemption.

When Christ was born the world was passing through turbulent times. There were wars and warmakers. There were tyrants who enslaved their fellow men. There were classes and class distinctions which divided the then known world into factions which fought among each other. The morals of the people had fallen to a low ebb.

Wars, Past and Future

It was into this world that God sent his only Son to save man from his own folly. His primary purpose was to save souls—to redeem individuals. But, along with this primary purpose was the corollary purpose of saving nations and peoples and governments. It follows in logical order that men with redeemed souls will naturally have better governments and will compose better peoples and better nations. A moral and forgiving individual must naturally treat his fellow man with great respect and will tend to follow that most basic of all principles, the Golden Rule.

But let us examine the state of our stewardship of God's Love and Christ's redemption 1948 years later.

In some respects the world of today is not very different from the world at the time of Christ. We still have our wars and our warmakers. We still have our tyrants and slaves are still made of men who should be free. We have classes and class distinctions which have resulted in bloodshed and sorrow. And the morals of today's people, certainly in the broader sense, are at an extremely low point.

We have recently fought the most terrible war in all history. We are standing on the brink of another disaster. It is not inevitable. This even bigger and more terrible war which looms can be avoided if our statesmen and diplomats will adopt some of Christ's teachings and follow them in their negotiations.

We read in our papers daily of man's inhumanity to man, of slave labor, of concentration camps and terrorism. We read of minorities of all kinds being persecuted and we hear of the killings and sorrows which this brings to the little people of the earth. And all of this tragedy indicates an immorality which verges on being amoral.

Thus, we are forced to draw the conclusion that our stewardship of God's Love and Christ's redemption has not been good.

In some respects our world is greatly different from Christ's. We have more efficient means of production. We have faster communications and transportation. We have developed our scientific approach to production and transportation to an extremely high point so that advance planning is possible. And we certainly have developed engineering skills until they are far superior to those which were known in the time of Christ.

Chances for Peace Today

Thus, today we have a much better chance of maintaining "peace on earth to men of good will" than we had 1948 years ago. At the same time, it is important that engineers take heed of these improved conditions and realize that they have a great responsibility in maintaining this world-wide peace.

Many of the developments which make today's world different from the world of Christ can be traced to engineering. The long list includes: homes, better heating, better bridges, improved streets and highways, efficient labor saving devices, better sources of raw materials and better methods of treating raw materials as well as some newly discovered materials, and many others.

Today's wars are fought chiefly for economic reasons and are instigated by dictorial Tyrants.

There is no justification for the ways and means used by a Hitler or similar tyrant. There is much justification, however, for any leader's trying to improve the living standards of his people, *provided he uses ethical and moral means.*

Consequently, we reach the conclusion that the leaders of the world might well look to engineers to improve the lot of their peoples. The professional engineers have been in large measure responsible for what progress has been made since the time of Christ. Thus, they constitute a natural group to advise on the maximum effective utilization of the machines and devices which have provided that progress.

The engineer is in an enviable position to aid in the bringing about of a better distribution of the material goods of the world among nations and among the peoples of those nations. He has a definite responsibility to use his talents in this direction.

If each engineer will apply his talents in the best possible manner a great and important contribution to the peace of the world will result. There may come a time when we will never again have a Christmas without "peace on earth to men of good will".

ANNUAL MEETING PLANS COMPLETED DELEGATES LEAVE FOR BUFFALO

Plans have been completed for the Thirteenth Annual Meeting and delegates are already starting for Buffalo. All indications are that the meeting will measure up to advance notices and be the biggest, best and most important that NSPE has ever held.

Of great interest and practical value will be the Saturday, December 6 luncheon speech by Kenneth Markwell, Assistant Commissioner of the U. S. Bureau of Reclamation. Mr. Markwell's subject will be "The Engineer's Role in Resource Conservation."

Another feature of the meeting will be the Friday, December 5 luncheon speech by W. B. Leet, an engineer with the Pennsylvania Public Utilities Commission on "Engineering Data and the Pyramids."

Design and Development

Kenneth Markwell, as Assistant Commissioner of the Bureau of Reclamation, in charge of design and construction, is a key figure in the greatest Western river resources development program this nation has ever known. Mr. Markwell also coordinates the activities of the Bureau in the development of hydroelectric power. The Bureau is now one of the leading hydroelectric power producers in the world.

Mr. Markwell's 25 years in the field of civil engineering thoroughly qualify him for his present position and as a speaker before NSPE's annual meeting. He was chief draftsman for the city of Memphis until 1926 when he formed a private engineering firm known as Kenneth Markwell and Associates, which he headed until 1933. During this period, his experience included many varied projects, among them hydraulic anaylsis of Huling Tunnel, Memphis, Tenn. and Hedgemoor development, Memphis; associate engineer, Murray Wood Products Plant, Memphis; Spang Chalfant Steel Yards, Memphis; industrial buildings, Woodland development, Oklahoma City; arch bridges; port development, as consulting engineer to Memphis Harbor Commission, including river bank stabilization; docks and terminals.

In 1933 he left private practice to join the Public Works Administration as Senior Engineering Examiner. Between this period and late 1937 he served subsequently as State Engineer and State Director for this agency, with headquarters at Nashville, Tenn. He reviewed and passed upon all plans, designs, and specifications for PWA construction in the State of Tennessee, work estimated to cost $60,000,000. Also, he received and reported on all applications for new power projects.

Project Engineer

Between 1937-38 he served as Chief Project Engineer for PWA where he passed on applications for new power projects, in the Tennessee Valley area, costing approximately $30,000,000. He continued with the PWA, becoming Project Engineer on the $57,000,000 Santee-Cooper project, a hydroelectric development near Charleston, South Carolina. In this assignment, he made final decisions on all designs, plans, and specifications for the project. He was responsible for the inspection of all construction. The job involved dams, spillway levees, locks, canals, power house channels, transmission lines, substations, and similar projects.

Before joining the Bureau of Reclamation he served, in a joint capacity, as Regional Director and Special Representative of the Federal Works Administrator on power projects. He supervised War Public Works and War Public Service projects east of the Mississippi River estimated to cost another $75,000,000.

He is a native of Oklahoma City, Oklahoma. He received a B.S. degree in civil engineering from the University of Oklahoma in 1920. He is married and has three children.

W. B. Leet is a practical modern engineer who makes his every day living with the Pennsylvania Public Utilities Commission. However, in his spare time, Mr. Leet devotes his energies to the study of engineering problems of antiquity.

Mr. Leet, who is a member of NSPE, is considered an authority on the subject and those who have heard him expound on it advise that his speech on the Pyramids will be both entertaining and instructive.

Entertainment Assured

Entertaining luncheon meetings have been assured for both Friday and Saturday. Alan Griffin Stanford, vice-president of NSPE for the Southern area, will be toastmaster

(*Continued on Page* 12)

Kenneth Markwell, Assistant Commissioner of Bureau of Reclamation, to speak at NSPE Meeting.

Committee's Wage and Hour Study Recommends Professional Recognition

The Wage and Hour Law recognizes lawyers and doctors as professional personnel, but does not accord the same dignity to the engineer. Therefore, NSPE's new Committee on the Problems of Young Engineers has conducted a study to determine what steps should be taken to remedy the situation. The results of this study appear in the following article.

NSPE's new Committee on the Problems of Young Engineers is concerned with the failure of the Wage and Hour Administration to recognize engineers as professional men. Consequently, it considered this matter carefully and has formulated this statement which it beleives comes within the scope of NSPE's functions, as a large professional engineers' group. The total membership of our Society now totals someover 17,000.

Registered Professional Engineer

Because this statement uses the words, "Registered Professional Engineer," we believe it will be in order to explain briefly the meaning and connotations of this term. The word, "Engineer," means many things to many people. However, we do not think this is the proper place to debate the correctness of its usage. We *would* like to point out that today each of our 48 States as well as the territories and possessions of the United States have statutes governing the practice of engineering and the holding out of engineering services to the public. These State laws vary considerably in their details, but in all instances these laws insure to the public professional engineers qualified to act in such a capacity and to this fact the several States attest through their examining and certification procedures. Those persons who have qualified under an appropriate State law are, therefore, the Registered Professional Engineers of which we speak and are the persons whose interests we are primarily concerned with in this presentation.

Definition in Law

Section 541.3 of the Administrator's Regulations issued under authority of Section 13 (a) (1) of the Fair Labor Standards Act defines the term, "employee employed in a bona fide professional capacity," and it is this Section of the Regulations to which we address our remarks.

We believe that the present definition is generally satisfactory insofar as the general terms define professional employment and, in fact, we note that Congress has used the present definition as the base for its definition of a professional employee under the Labor Management Relations Act, 1947. Congress, however, has seen fit to omit certain provisions of the Administrator's definition and one of these omissions is Subsection (B) which requires a person to be compensated for his services on a salary or fee basis at a rate of not less than $200 per month in order to qualify as a professional employee. We shall presently consider also the proviso of this Subsection which excludes the holder of a valid license or certificate for the practice of law or medicine and who is actually engaged in the practice thereof, from the qualifying minimum compensation requirement.

EJC 1946 Survey

It is our understanding that various proposals have been made to the Administrator that the amount of $200 per month should be increased in the light of present ecnomic circumstances. Fortunately the engineering profession has very recently been the subject of an exhaustive and authoritative study of the salary question and other considerations. This study was conducted for the Engineers Joiht Council Committee on the 1946 Survey of the Engineering Profession by Mr. Andrew Fraser, an experienced and highly competent consultant. The National Society of Professional Engineers participated in this study, which was based on data furnished by 47,272 professional engineers, all of whom are members of one or more of the six engineering societies sponsoring the report. We believe that this report will prove valuable in determining the engineers' true economic position and relating it to others.

Turning then to this report entitled, "The Engineering Profession in Transition," we note on page 7 that in 1946 all professional engineers located in the Continental United States reported base monthly salary rates at the median earnings level ranging from $231 a month for new engineers to $554 a month for engineers who had been in the profession 35 to 39 year. Table 1.2a on page 8 discloses that the median monthy earnings increase from the low point of $231 monthly to $305 per month for those with four years of experience.

Significance of Figure

We point out this figure of earnings for those with four years of experience because it has a special significance for the engineering profession. Most of the State Engineering Registration Laws which we have mentioned previously provide that a person may not obtain a license or certificate as a Registered Professional Engineer until he has accumulated a certain number of years experience. This minimum experience requirement varies also within the several states but the most general requirement for licensure is for four years experience following graduation from an accredited engineering college. In no case is the minimum period less than four years. It is significant also that the Model Engineering Registration Law recommends four years of experience in addition to an accepted engineering degree as the minimum for qualification as a Registered Professional Engineer. This Model Law has been approved by the leading enginering organizations of the country, including the National Society of Professional Enginers and the National Council of State Boards of Enginering Examiners.

Engineers in Training

During this four year period a person may be recognized under State Law as a so-called, "Engineer-in-Training," or other similar term but he is not a Registered Professional Engineer. However, such a person may meet the definition of Section 541.3 of the Regulations for the purposes of the Fair Labor Standards

Act. It is therefore our conclusion that a minimum qualification figure of $300 per month should be substituted for the present $200 per month. This would mean that the average pre-professional employee, even though he might meet the general qualifications set forth in the definition as a professional employee would not be removed from the wage and hour provisions, except in those instances wherein the pre-professional meets the general qualifications and earns over $300 per month.

When we turn our attention, however, to the Registered Professional Engineer we are faced with different considerations. The Registered Professional Engineer is a "professional" on an equal plane with the other learned professions. Under the various State laws governing engineering registration it is required in most cases that a person be a graduate of an approved engineering curriculum of four years or more plus the number of years' experience previously mentioned, which is not less than four in any case. Incidentally, the standards of the approved engineering colleges are checked and accredited by the Engineers' Council for Professional Development. This organization plays the same role in engineering as that played by the accrediting organizations of the American Bar Association and the American Medical Association. In some cases registration may be obtained after a long period of experience of a kind and nature satisfactory to the State Board of Engineering Examiners, generally eight years or more, plus the successful completion of an examination designed to show knowledge and skill approximating that attained through graduation in an approved four-year engineering curriculum.

Status Under State Laws

The very definition of a "professional engineer" in the various State laws indicates the full professional status of the engineer. The following example is from the Model Law, which is typical of many state law definitions. "The term 'professional engineer' within the meaning and intent of this Act shall mean a person who by reason of his special knowledge of the mathematical and physical sciences and the principles and methods of engineering analysis and design, acquired by professional education and practical experience, is qualified to practice engineering as hereinafter defined, as attested by his legal registration as a Professional Engineer."

Equality with Other Professions

We cite these considerations as evidence that the Registered Professional Engineer is a full member of the professional world and as such is entitled to be placed on an equal footing with the other learned professions.

The present regulation excludes the doctors and lawyers from the salary requirement as a matter of course because their professional qualifications are certified by the States. With this view we agree. However, we do believe also that the explicit recognition of certain professions should not be restricted to law and medicine.

We quote from the report of the hearing officer who presided over the last hearing of this subject in 1940. In his report the hearing officer mentioned, "the three traditional professions of law, medicine, and theology . . ." but recognized that these three professions no longer are the sole occupiers of the professional classification, citing the statements of the United States Supreme Court in United States v. Laws, 163, U. S. 258 (1896) in this connection.

The Wage and Hour Administration as an administrative agency will soon amend its regulations governing minimum wages and maximum hours, according to late reports. It is expected that the arguments set forth in this statement may be presented to the Administrator by NSPE.

It has also been learned that Committees of the House and Senate will hold hearings on possible amendments to the Wage and Hour Act in the near future. It is possible that NSPE will have a representative testify before the appropriate committees when these scheduled hearings are held.

At that relatively early date the Supreme Court recognized that "formerly theology, law, and medicine were specifically known as the professions; but as the application of science and learning are extended to other departments of affairs, other vocations also receive the name." The hearing officer in 1940 further recognized that, "although this indicates that a reasonable definition of 'professional' must extend beyond the traditional professions, it also indicates that some special consideration for members of these professions is reasonable." He then concluded that, "the action of the appropriate State authority in issuing the certificate or license may be taken as an adequate substitute for the salary test in the case of the professions of law and medicine."

We submit that the engineering profession has reached the point which entitles it on the same basis, to recognition as a profession. We have noted above that the hearing officer in 1940 placed great reliance upon the fact of State licensure for law and medicine. We have also previously pointed out that each State of the United States, as well as the Territories and Possessions likewise license and register engineers. We therefore believe we are justified in asking that the present regulation be amended to include Registered Professional Enginers in Subsection (B) of Section 541.3 along with lawyers and doctors.

Simple Amendment

This amendment would be simply accomplished by inserting the word, "engineering," in the Subsection. This change would make Subsection (B) of Section 541.3 read as follows:

"(B) Who is compensated for his services on a salary or fee basis at a rate of not less than $200 (we have suggested $300) per month (exclusive of board, lodging, or other facilities); provided that this subsection (B) shall not apply in the case of an employee who is the holder of a valid license or certificate permitting the practice of law, medicine, engineering, or any of their branches and who is actually engaged in the practice thereof."

This change will give the Registered Professional Engineer his rightful due. It will recognize that the action of the appropriate State authority in certifying the professional status of an engineer is a full and adequate test to determine that such a person is a "professional" within the meaning and intent of the Fair Labor Standards Act.

We need have no fear that this recognition will enable an avoidance of adequate compensation for Registered Professional Engineers. A Professional Engineer, as any other Professional man, recognizes that the safeguarding and improvement of his status comes through high principles of ethics and association with fellow professionals on a plane commensurate with his high calling.

NEW YORK ENGINEER-IN-TRAINING GROUP OUTLINES OBJECTIVES FOR YOUNGER MEN

By HARVEY M. BALTER
President, N. Y. State Society of Engineers in Training

The period between graduation and the achievement of full professional status represents a gap in the planned development of today's engineer. In many cases unguided and uninspired the young engineer charts a needlessly misdirected course. His loss is not a purely personal one; it represents a loss of potential strength to the unified profession we are trying to build. It represents a civic and social loss in duties unperformed and energies unapplied. This profession now so concerned with unification must take steps to ensure that it not be guilty of building a towering monument on a faulty foundation. The properly guided progression of young engineers to professional stature will be a guarantee of growing and continuing professional strength.

Intangibles of Profession

The lessons which must be taught the embryo engineer transcend the purely technical. They must be concerned with the intangibles of professionalism; integrity, dignity, the desire to serve worthily and honestly. They must instill the attitudes and ethics of the professional and give exercise in the customs of professional association. Past experiences have indicated clearly the fallacy of leaving the attainment of professional habits to chance.

The cynical disillusionment visible in the attitudes of so many young engineers has caused much resentment among older engineers. There is certainly nothing intrinsic in this challenging profession of ours which can be held accountable. It is the disregard for the welfare and development of the younger engineer which has given rise to these attitudes. Fortunately a growing awareness of the need for effective measures now exists among professional engineers. The small group of PEs who recognized the need many years ago has grown. It is hoped that this article, dealing as it does with the New York State Society of Professional Engineers solution of the problem, will help accelerate that growth.

Before 1940, the NYSSPE, realizing the need to formalize the status of young engineers with professional aspirations, successfully petitioned the State Education Department toward separating the professional license examinations into two parts; the first of which could be taken immediately after graduation and the second after the attainment of sufficient engineering experience to qualify for the license. It thus established a separation between those interested in professional development and those to whom the practices of engineering were just a trade.

This achievement would have been of small moment had the PEs not recognized that something else was needed. That "something else" was a vehicle which would make the status of the Engineer in Training (as those who passed the first examination came to be known) desirable of attainment and which would give EITs an opportunity for the development and practice of the many habits and practices that go to make up professionalism. The New York State Society of Engineers-in-Training was that vehicle.

Sponsored by NYSSPE

This Society was sponsored by the NYSSPE and its organization implemented in January of 1946 at a meeting of EITs assembled by the NYSSPE. Dr. John C. Riedel served as the moderator. A steering committee of volunteers was formed and procedures adopted for writing a constitution and electing officers. By March the committee presented to a general meeting of EITs a constitution which reconciled the many divergent viewpoints and found unanimous acceptance. Officers were elected at this same meeting and the NYSSEIT officially came into being. During the early phase of the Society's existence the financial burden was carried by the NYSSPE partly as an outright gift and partly as a loan repayable at convenience. Membership in the new society was limited to graduate engineers who had successfully passed the examinations and been certified as Engineers-in-Training by the State of New York.

The objectives of the society as set forth in its constitution are worth restating here, since they give some indication of the scope and importance of its work.

NYSSEIT Objectives

1. The promotion of the status of the Engineer-in-Training to that of the professional Engineer in accordance with the provisions of the laws of the State of New York.
2. The dissemination to both public and profession of information relevant to the Engineer-in-Training.
3. The establishment of a Code of Ethics for the Engineer-in-Training against improper use.
5. The development of a close association with the New York State Society of Professional Engineers and the furtherance of mutual aspirations.
6. The sponsorship and promotion of procedures for ensuring adequate compensation for Engineers-in-Training.
7. The improvement of engineering education and the development of the student to the status of Engineer-in-Training.

The society is continually expanding its membership and has recently undertaken a program to induce senior engineering students to take the EIT examinations and become members upon graduation. The inevitable progression of engineers from the EIT society to the PE society closes the gap and ensures that all young engineers have the opportunity of being an integral, effective part of the profession.

The discussion of common problems and the chance for effective action in their solution, as well as the association with older experienced engineers fills a long neglected phase of the young engineer's training.

The NYSSEIT in its desire to see this type of recognition made available to young engineers in other states would welcome the opportunity of aiding and advising engineers in the states not already providing for EITs or their equivalent. Interested persons are asked to communicate with Mr. Richard E. Nally, recording secretary, 775 Macon St., Brooklyn 33, N. Y.

NSPE Members Among Top Winners Of Lincoln Awards

KISER E. DUMBAULD

HILBORN MARTIN PETROFESI

NSPE members walked off with over $15,000 in awards in the recently concluded James F. Lincoln Arc Welding Foundation's Design for Progress program.

Top money winner of the competition was Mr. Kiser E. Dumbauld, design engineer of the Bureau of Bridges of the Ohio State Highway Department. Mr. Dumbauld is a member of both the Ohio Society and NSPE. He was awarded $10,700, the Second Grand Award, for his paper in the Structural Building and Bridges Classification. His subject was the redesign to welded construction of three of Ohio's bridges.

Top Money Winner

Mr. Dumbauld became top money winner in the competition when the First Grand Award of $13,300 was divided among three authors of a paper in the Aircraft Classification.

Mr. Dumbauld, who is 46, is a member of the Columbus, Ohio chapter of NSPE. He lives at 1844 Chatfield Road. His work involves designs, details, checks and estimates for highway structures for the state. He has ben in the Department for 20 years. Previous to his employment with the state he worked as a structural engineer in the Ohio State University architect's office.

He received his degree in Civil Engineering at Ohio State University in 1923 and became a Registered Civil Engineer in 1931. He is also a Registered Surveyor.

Other NSPE member prize winners in the competition were: H. D. Hilborn of Houston, Texas; Alfred K. Martin, Jackson, Michigan; and Mitchall F. Petrofesi of New York City.

Other Winners

H. D. Hilborn, 59, author of the paper winning the second Structural (Houses and Miscellaneous) Classificational Award of $2,200, lives at 8250 Park Place Boulevard, Houston, Texas. He is Chief Engineer in the Structural Division of the Emsco Derrick & Equipment Company in Houston and is in charge of all structural enginering projects for the Mid-Continent field including supervision of designs and shop drawings. He has been with the firm for fifteen years and has had thirty-seven years of structural engineering experience including seven years private practice.

Mr. Hilborn holds a Bachelor of Science degree in Civil Engineering and is a member of THE NATIONAL SOCIETY PROFESSIONAL ENGINEERS and the American Petroleum Institute.

He is married and has a son and one daughter. His spare time is spent in his work shop and with his family. Occasionally he writes articles for Engineering News-Record and other engineering publications.

Alfred K. Martin, 51, author of the paper winning the fourth Structural (Houses and Miscellaneous) Classificational Award of $1,300, lives at 1002 S. Wisner Street, Jackson, Michigan. He is a Structural Engineer supervising structural steel and concrete design for electrical substations for the Consumers Power Company of Jackson. He has been with the firm ten years. He started in the engineering field as a tracer on the Golden Gate Bridge for the Strauss Bascule Steel Bridge Company of Chicago, Illinois in 1922.

Mr. Martin spent two years at the Lane Junior College and one year at Northwestern University. Then he had two years of night school at the Art Institute in Chicago and one year of night school learning arc welding fundamentals at the University of Michigan. He is a Registered Professional Engineer. Mr. Martin belongs to the NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS and is Social Chairman of the Jackson Engineer's Club. He served in World War I and also belongs to the American Legion, Post No. 29.

Buildings and Bridges

He is married and has one daughter and one son. His hobbies are architecture, photography, baseball and traveling.

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Review of Canadian Registration Shows Analogy to U. S. Experience

By DEAN C. R. YOUNG,
University of Toronto, Ontario Can.

Prior to confederation of the Canadian provinces, in 1867, there was so little employment for engineers in Canada that organized attempts to promote the advancement of the engineering profession made but scant headway. The first sustained effort in this direction came with the establishment of the Canadian Society of Civil Engineers, in 1887. The Engineering Institute of Canada, with its broader interests and wider scope, has since 1918 carried on and vastly extended the activities of the parent society from which it sprang.

Classic Paper Presented

Early in the nineties sustained agitation developed for the constitution of the profession in Canada as a closed corporation, analogous to those of law and medicine. In 1892, Alan Macdougall, one of the far-seeing and resolute engineers who had taken part in the establishment of the Canadian Society of Civil Engineers, presented to the Society a notable paper on "The Professional Status". It was a classic. In it were challengingly set out most of the concepts and arguments that still engage the thought of those who concern themselves with the matter at all.

The discussion bore fruit. Drafts of acts for the provincial incorporation of engineers were prepared. According to the terms of the British North America Act, which constitutes whatever of a written constitution Canada possesses, legislation controlling engineering practice is a matter for the provinces rather than for the Dominion. Proceeding in conformity with this, the members of the Canadian Society of Civil Engineers in Manitoba succeeded in obtaining legal recognition of engineering as a profession in that province by the enactment of the Manitoba Civil Engineers Act of 1896. Here, as elsewhere in Canada at that time, "civil engineering" was deemed to comprehend all engineering that was not military. Quebec followed suit in 1898.

*Based on an address of Dean C. R. Young, University of Toronto, delivered in Montreal, at the annual meeting of the Engineers' Council for Professional Development, October, 1947.

Clarence Richard Young is Dean of the Faculty of Applied Science and Engineering. University of Toronto. He has had much experience in both the practice of engineering and in education. He is eminently qualified to review the history of registration in Canada and comment upon its effects on the profession.

Much of Canada's experience is similar to that of the United States, and therefore, this article is significant to NSPE members.

Dean Young is a graduate of the University of Toronto in civil engineering. He has been President of the Engineering Institute of Canada, and has held important offices in ASCE, Canadian Engineering Standards Association, and the Royal Canadian Institute. He is also the author of many authoritative papers and books on engineering.

It is particularly fitting that Dean Young's article should be published in this issue of the AMERICAN ENGINEER. NSPE's annual meeting is being held just across the river from his native Canada early this month.

Proving difficult of operation, these acts were superseded in 1920 by improved acts administered respectively by the Association of Professional Engineers and the Corporation of Professional Engineers. In comparatively rapid succession all the remaining provinces, except Prince Edward Island, which by reason of its smallness has few engineers, have enacted restrictive legislation.

Professional Status and Registration

While marked benefits to the public, as well as to engineers themselves, have been derived from the licensing movement, one undesirable consequence has followed in its train. *Far too many young men have come to assume that the only thing lying between them and full professional stature is the obtaining of the legal right to practice.* Nothing could be more illusory. There is no assurance whatever that one so equipped will necessarily be accepted by a discerning and critical public as a person fully entitled to the esteem and deference that by common consent are accorded the members of the older and so-called learned professions. One illiterate or boorish license-holder may offset in the public mind the merits of a score of others about whom there can be no question. The whole profession is compromised by the unacceptable few.

Not enough weight has been given to general education by either the professional schools of engineering or the licensing associations. Two screens in tandem should be placed in the educational and training stream. The first would function as a selective device to ensure, in so far as may be possible, that those who enter the professional schools have those humanistic and cultural interests and capacities that must be inherent in one who hopes to be accepted as a member of a true profession. The second should be introduced by the licensing bodies in scanning applications for registration as a check on the effectiveness of the first as an instrument of selection of personnel for educational and professional training and as a corrective if it has failed.

Admission Requirements

Faculties and colleges of engineering ought to revise sharply upward their general educational requirements for admission, so that the twenty-five per cent or so of young men who should remain in technical institutes or secondary vocational schools are kept there and are not permitted to impede the programs of the professional schools. Far better work could be done in the latter and the quality of their output made the more impressive if they were not required under circumstances presently existing in Canada to superimpose on true collegiate work the added task of dealing with the area of education that lies between the secondary schools and the universities. Those whose talents and interests definitely belong to this zone are for the most part unpromising aspirants for full professional qualification.

Emphasis on General Education

On their part, the licensing bodies should place increasing emphasis on

the general educational attainments of those who seek registration. There are still substantial numbers of applicants who base their claims almost wholly on technical knowledge and competency and but little on acquaintance with those things that characterize a broadly educated man. As a result of undue emphasis on the importance of excellence in mathematics and science some men of circumscribed outlook have unfortunately slipped through the universities with small evidence of ability to express themselves clearly or correctly in their own language. The proposed second barrier against illiteracy in professional circles could be introduced by the licensing associations through requiring in respect of the graduates of the professional schools a minimum standing in non-technical subjects and through a corresponding test of those who seek registration through examination.

It is unfortunate that some young men look to the professional associations to do for them what only they can do for themselves. Attainment of that degree of public regard that in effect accords to the one that prompts it a vital place in the community wherein he labors derives from the personal merits of the man himself and not from the bulk or the forcefulness of any organization to which he belongs. One cannot be securely legislated into high places. Professional organizations have a value that is largely limited by technological and economic considerations. They cannot give that quality of understanding, that sympathetic man-to-man relationship that determines ultimate acceptability.

Canadian Professional Organizations

It would be unfair to say that engineering organizations in Canada have been unaware of this fundamental principle. They are doing much to raise the quality of the profession by directing into it young men of the highest personal promise and correspondingly by exclusion of those that are unsuitable. They no longer rest their labors on the promotion of technical knowledge and competency. The development of the engineer as a person bulks large in the policies of all of them. No longer is it merely a matter of producing annually an output of human problem-solving machines in quantity gauged to the supposed demands of industry.

Such selection of engineering students as is possible through counselling and guidance programs has progressed notably in the past few years. Through its Committee on the Training and Welfare of the Young Engineer, established in 1939, the Engineering Institute of Canada set up counselling committees in its various branches across the country. Growing out of this the Canadian Committee for Student Guidance in Science and Engineering composed of representatives from the Canadian Institute of Mining and Metallurgy and the Chemical Institute of Canada as well as from the Engineering Institute of Canada was set up and has expanded the original effort.

These Committees have served a double purpose. They have drawn to the attention of young men who were contemplating engineering careers the requisites for success in such callings and have diverted into other fields those who gave little promise of success in the engineering field. At the same time, prospective students have been shown, and the news travels fast, that many senior members of the profession are interested in the personal fortunes of those who seek entrance to it. Identification of eminent practitioners with the interests of oncoming youth is an asset on both sides.

Guidance Service

Extension of guidance service to young engineers subsequent to graduation is being planned. Formal machinery providing sponsorship of each graduate by an experienced engineer does not appeal particularly to young Canadians, but they do appreciate and welcome the informal fraternization and encouragement that comes naturally when senior engineers mix in meetings and gatherings with those who have most of their careers before them.

Although no formal steps have as yet been taken to set up a system of accrediting of professional schools of engineering in Canada, there is little doubt that this will be undertaken in the not too distant future. A suitable mechanism would appear to be through the Committee on Applied Science and Engineering Education of the National Conference of Canadian Universities. This Committee, organized in May, 1946, had an excellent first meeting on the occasion of the annual Conference in May, 1947. It is composed of one representative from each of the member universities and colleges of the Conference offering engineering instruction at the university level. The desirability of making an early study of accrediting in Canada will be drawn to the attention of this Committee as soon as its 1947-48 organization is completed.

No organized measures for direct promotion of professional recognition in Canada have been devised. Individual members of the profession have, however, come into high and well-deserved prominence, not only through wartime activities, but in peaceful pursuits as well. One might cite the outstanding record of the Right Honorable C. D. Howe, Minister of Reconstruction and Supply, born an American, who before entering political life headed a highly successful firm of consulting engineers. General A. G. L. McNaughton, now President of the Atomic Energy Control Board of Canada and Chairman of the Canadian Delegation to the United Nations Atomic Commission, bears a responsibility that not only confers an honor on the profession in which he was trained, but places Canada immeasurably in his debt. Dr. C. J. Mackenzie, President of the National Research Council, has provided an illustration of the power of an able and resourceful engineer in directing the programs of a great scientific agency. The bench is honored by men who were trained as engineers and do not regret that approach. One such is the Honorable Mr. Justice R. E. Laidlaw, of the Appellate Division of the Supreme Court of Ontario. Diplomacy has made its bid too, for the services of those with technological training. Mr. C. Fraser Elliott, an able Deputy Minister of the Department of National Revenue, has become the Canadian Ambassador to Chile.

Resistance to Professional Advancement

It may appear strange that those members of the engineering profession who most frequently come into public notice are those who have moved over into other fields as a result of the capacity that they displayed while ranked amongst the engineers. Doubtless this is due to the fact that in public capacities they deal much more frequently with persons than they do with things and become more widely known for it. It might almost seem that the most effective approach to national eminence on the part of the engineer is to conduct a flank movement through territory traditionally occupied by members of other professions and callings.

(*Continued on Page* 15)

NYSSPE Survey Shows Striking Unions Lack Claimed Professional Membership

An unfortunate condition which tends to place professional engineers in the same class as technicians and semi-skilled workers has been illustrated during the last few weeks in two cases in New York.

These instances developed as a result of strikes which were called by the members of the Federation of Architects, Engineers, Chemists and Technicians (CIO) in the engineering departments of the Pilotless Plane Division of the Fairchild Airplane and Engine Corporation and of EBASCO Services, Inc., engineering subsidiary of Electric Bond and Share Co. In literature distributed by the union and in statements to the press, strikers have termed themselves "professional engineers." In one instance the claim was made, "Most of us are licensed by the State."

As a result of the widespread publicity being given to such statements and literature, the New York State Society of Professional Engineers directed its executive secretary, George Barrows, to ascertain, if possible, to what extent bona fide engi-engineers are involved in these labor disturbances.

Management Contract

Mr. Barrows contacted representatives of management in both cases and learned that few if any professional engineers are involved in either strike. The matter was further checked with representatives of the strikers at each plant. With reference to the Fairchild plant, the union has not seen fit to reply to two letters by which it was informed that the NYSSPE investigation indicated that no bona fide engineers are on strike against the company. The company, on the other hand, provided the NYSSPE with a complete roster of engineering employees which list was checked against the State roster of registered professional engineers. Not a single one of the strikers is listed as a professional engineer by the State.

"However," Mr. Barrows reports in the New York State publication, "representatives of the Ebasco strikers called at State Society headquarters where two of them identified themselves as licensed professional engineers of the State of New Jersey. All other evidence indicates that there is not a sufficient number of professional engineers involved to warrant the impression given to the public that the union actually represents professional engineers. It is interesting to note that the engineering departments of both concers still are operating with apparently little inconvenience despite the existence of picket lines.

Ascertaining Identity

"The activities of your [New York] Society in this matter have been for the purpose of correctly identifying to the public the participants in the strike. It is not considered a function of the Society to take a stand on either side of the controversy. Nevertheless, it is felt that the reputation of licensed professional engineers may be injured as a result of publicity regarding the union involved.

"According to the report of the U. S. House of Representatives' Special Committee on Un-American Activities, the actual and most active organizing head of this union, the FAECT, was Marcel Scherer who is a registered member of the Communist Party and, in 1931, was Communist candidate for alderman from the 37th District in Brooklyn. In 1931 and 1932 he was national secretary of the Communist-controlled Friends of the Soviet Union which published an official organ known as *Soviet Russia Today*. During his term of office, this publication called upon American workers to 'stop the transport of arms and munitions, rally to the defense of the Soviet Union.' Scherer's wife, Lena Davis, was state organizer for the Communist Party of New Jersey.

Government Record

"At the time of the Congressional report, the president of the FAECT was Lewis Alan Berne. His communistic record in government files was more than 10 years in extent. Among other outstanding activities in his career he sponsored the American Peace Mobilization which gave full encouragement to political strikes in defense industries and agitated against conscription and lend-lease. This group also gained considerable publicity by picketing the White House. At the 1943 convention of the CIO in Philadelphia, he pledged the resources of the FAECT to the CIO Political Action Committee.

"The government report lists the names of forty other persons, prominent in the FAECT, as identified with the Communist Party or with Communist-front organizations and describes how the union is controlled through 'the operation of a secret Communist faction or cell.' Proof of the existence and activity of this faction is given in 'exhibit 36,' which consists of the minutes of a National Faction Buro.

"In a front page article published by the *New York Journal-American*, Sunday, October 12, it was stated that Army and Navy Intelligence Agents and also the Army Security Division, had 'moved in' to conduct an inquiry at the Fairchild plant of 'the month-old strike of a Communist-controlled CIO engineers' union * * * regarded as a Red pattern to injure defense industries.'

Picketing of Homes

"In its conduct of the Fairchild strike the union has resorted to the picketing of the homes of workers who remained at their jobs. When the demonstrations were broken up, abusive literature was distributed to homes of neighbors of such workers. These tactics are considered incompatible with professional ethics and dignity and definitely injurious to the reputation of the engineering profession which the union falsely claims to represent in this instance.

"The New York State Education Law states that it is a misdemeanor to hold oneself out as 'entitled to practice professional engineering' unless duly licensed and registered under the law. It is the contention of your executive secretary that when this union refers to itself as composed of 'professional engineers most of whom are licensed by the State,' the members of that union *are* holding themselves out as 'entitled to practice professional engineering.' In the opinion of your executive secretary, representatives of the attorney general's department hedged when they contended that the strikers are not 'offering to practice' professional engineering. Reminded that the letter

(*Continued on Page* 12)

Younger Men Support NSPE As Professional Group

Ways and means of implementing NSPE's desire to be of assistance to younger men of the engineering profession have been difficult to find. One possible solution to the problem appears in the activities of several associations of General Electric Engineers. Recent developments are reported in the following article.

THE Transmitter

OFFICIAL PUBLICATION OF THE FORT WAYNE ASSOCIATION OF GENERAL ELECTRIC ENGINEERS

Vol. III — August, 1947 — No. 1

FWAGEE Policy on National Organization

In accordance with the results of the recent poll of FWAGEE members on the question of national organization, the executive council has adopted the following resolution:

1. Engineers should strive to achieve social recognition and financial compensation on a bona fide professional level.
2. To achieve this requires a national organization of engineers which can effectively convince society that engineers are professionals and that their contribution to society's welfare merits much more social recognition and financial compensation.
3. The National Society of Professional Engineers offers the most practical nucleus for such an organization because:
   (a) It is an organization for engineers only and for all engineers regardless of specialization.
   (b) It defines an engineer by using society's own definition which is registration by society's government.
   (c) It is interested fundamentally in the engineers' social and economic welfare and does not delve into the technical aspects of the profession.
   (d) It is a young and vigorously growing organization.
4. Your executive council therefore recommends that each member of the association immediately apply for registration as a Professional Engineer or an Engineer-in-Training. As soon as you have been duly registered, your executive council recommends that you affiliate yourselves with the Indiana Society of Professional Engineers by making application for active or junior membership in the Indiana Society of Professional Engineers and obtaining application blanks and information on registration can be obtained from the councilmen or from L. W. Wagstman, chairman of the committee on professional development.

Why Engineers Should Register

The National Society of Professional Engineers has been chosen as the nucleus around which a united engineering front can most readily be formed. A natural question is, "How can this society increase my social and economic status?"

There are four basic programs which the National Society of Professional Engineers, acting as a united front, can accomplish. These four programs will definitely increase your social and economic status. It is the duty of all of us to see that these programs are carried out.

(Continued on page 4, Col. 1)

Engineering Efficiency Committee Established

This year a committee, with C. M. Summers as chairman, has been established to study the problem of Engineering Efficiency. The term engineering efficiency is very abstract, and to every engineer it probably conveys a different thought. Presumably it has something to do with the amount of time that the engineer devotes to engineering work. But what is engineering work? An engineer, one moment, may be making detailed calculation of the magnetic circuit of a complex machine. The next moment he may be convinced that he is wasting time on the results of his calculations on

(Continued on page 4, Col. 3)

Ransom Discusses Professional Status at Annual Meeting

C. W. Ransom, of Pittsfield, addressed the annual meeting of FWAGEE, Monday evening, June 16. His talk covered the status of engineering as a profession and what has and is being done to improve the engineers' position. He also discussed the probable effect of the Taft-Hartley bill on the engineer.

Federal legislation has been proposed by engineering societies. In many states "Engineer-in-Training" laws have been enacted to protect men preparing for engineering from indiscriminate inclusion in collective bargaining groups. In Pittsfield and Schenectady, classes have been organized to prepare men for state examinations. These classes, the directors of the technical societies more alert, and all engineers more firmly imbued with a sense of loyalty to the profession.

The Taft-Hartley bill includes a definition of professional employee so as to include engineers. It further provides that professional employees shall vote in a separate group on questions of representation by a union as bargaining agent. In the representation election, the Labor Committee to the effect that free association and bargaining between employers and organization of professional employees, whether or not they contain supervisory employees, is implicit in the law. This should resolve the ambiguous position of the "double channel" system.

After his talk, Mr. Ransom answered questions and talked in-

(Continued on page 4, Col. 2)

Fort Wayne Association's Publication

In its effort to bring about the recognition of younger engineers the NSPE Board of Directors last July authorized the appointment of a standing Committee to deal with their problems.

This Committee has now held its first meeting and has been officially named the Committee on the Problems of the Young Engineer. While NSPE has long been interested in the problems of enginers-in-training and younger men in the profession, much of the progress which has been made to date in establishing machinery to deal with these problems is due to the interest of engineers employed by the Schenectady and Fort Wayne plants of the General Electric Corporation.

The enginers employed in these plants, particularly the younger men, have been concerned from a practical standpoint with these problems for a long period. They are, for the most part, representative of group which NSPE is trying to help in its program.

Both the Schenectady and Fort Wayne plants of General Electric have associations of engineers These groups have sought for some time means of national organization for their own social and economic protection. They decided that unions do not provide the answer and looked for another method of handling their problems. NSPE was investigated and originally, the conclusion was reached that it did not provide the answer.

However, after a reinspection and numerous conferences between representatives of the two groups, the associations changed their opinion, decided that NSPE could provide the answer to their problems and started a movement to affiliate with the Society.

An excellent statement of the thinking of these groups of younger engineers appeared in a recent issue of *The Transmitter*, official publication of the Fort Wayne Association of General Electric Engineers. It reads as follows:

FWAGEE Policy on National Organization

"In accordance with the results of the recent poll of FWAGEE members on the question of national organization, the executive council has adopted the following resolution:

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"4. Your executive council therefore recommends that each member of the association immediately apply for registration as a Professional Engineer or an Engineer-in-Training. As soon as you have been duly registered, your executive coun-

cil recommends that you affiliate yourself with the National Society of Professional Engineers by making application for active or junior membership in the Indiana Society of Professional Engineers."

This policy was announced after the July Board had agreed to establish a standing committee to deal with the problems of younger men in the profession. However, it was certainly under consideration by the Fort Wayne Association prior to the Board meeting since it most certainly represents a well considered statement, advancing excellent reasons for affiliation with NSPE.

According to all indications these two groups are ready and anxious to cooperate in the NSPE program. It is expected that a vigorous program will result from the pioneering work which was carried on by the Schenectady association and the follow through of the Fort Wayne group.

Discussion of this program, together with its details will provide an important point for discussion at the annual meeting in Buffalo.

Young Engineer's Committee Meets

President Ritchie Lawrie, Jr., has completed making appointments to the new committee to deal with younger engineers' problems which was created in Washington at the July Board of Directors meeting.

The Commitee held its first meeting in New York City and will be ready to make a formal report at the NSPE annual meeting in Buffalo. The new group will be known as the Committee on Problems of the Young Engineer. It will operate under the chairmanship of William F. Ryan, Managing Engineer of Stone and Webster Engineering Corporation, 49 Federal Street, Boston, Mass. Mr. Ryan is also a nominee for the office of NSPE vice-president for the 1948 term.

The official name of the Committee, according to reports from its first meeting, will be descriptive of the duties and functions which it will perform.

In addition ot Mr. Ryan, committee members are: W. H. Gille, Chief Engineer, Minneapolis - Honeywell Company, Minneapolis, Minnesota; Vance S. Firestone, Mechanical Engineer, Pharis Rubber Company, Newark, Ohio; Mr. V. E. Gunlock, Commissioner, Department of Subways and Superhighways, City of Chicago; Charles W. Burke, Chief Engineer, New York City Transit Department, New York City; Bruce Williams, The Bruce Williams Laboratories, 620 Joplin Street, Joplin, Missouri; T. M. Linville, Engineering General Division, General Electric Company, Schenectady, New York; Clark W. Ransom, 117 Dalton Ave., Pittsfield, Mass; and J. Elmer Housley, Aluminum Company of America, Alcoa, Tennessee.

NYSSPE Scores Union Claim

(*Continued from Page* 10)

of the law also adds 'or hold himself out as entitled to practice,' it was explained that the attorney general's deparment can act only when a case is referred to it after investigation.

"The matter has been reported to the State Education Department's Investigator for the Professions who contends that that office presently has no basis upon which it can undertake an investigation which would result in any constructive solution of the matter. However, correspondence was referred to the Executive Secretary on Professional Conduct.

"Whatever may be done to protect the interests of bona fide licensed professional engineers in this case, it seems apparent that the situation points to the necessity for further legal definition and limitation to the use of the term engineer. Conceivably, it may also demonstrate the value of professional provisions of the Taft-Hartley Act since it is believed that many professionally-qualified engineers may presently be unwilling members of such union organizations. In such instances, a way of escape is now open.

"Other avenues of legal action may present themselves and in this regard your executive secretary feels that a debt of appreciation is owed to member James Allen Tuck (New York) with whom some of the problems were discussed. At no cost to the Society, Mr. Tuck made the services of his personal attorney, Charles W. Newmark, available to your secretary for an analysis of legal implications. It is felt that the counsel of Mr. Newmark has been of great value to the NYSSPE.

"It is a matter of interest to note that the FAECT claims a national membership roughly duplicate membership of the National Society of Professional Engineers. The NSPE is composed entirely of professional engineers while the FAECT derives its membership from a heterogeneous mass. Every individual professional engineer must realize that he inevitably must be represented by one group or the other in matters pertaining to professional and economic welfare. The background of the opposing groups should provide a clear-cut basis for choice and an opportunity to NYSSPE membership committees."

Lincoln Award Prize Winnsrs

(*Continued from Page* 7)

Michael F. Petrofesi, 43, author of the paper winning the fourth Structural (Buildings and Bridges) Classificational Award of $950, lives at 4150 Paulding Avenue, New York, New York. He is Assistant Civil Engineer with the Office of the President of the Borough of Manhattan in New York and supervises the design and planning of express highways, including viaducts and overpasses.

Mr. Petrofesi attended the Manhattan College in New York and graduated from there in 1928 with the degree of Civil Engineer. He is a member of the American Society of Civil Engineers.

He is a widower with four daughters. His hobby is playing the piano, both clasiscal and modern music and his favorite sport is baseball.

Annual Meeting Plans Complete

(*Continued from Page* 3)

for the Friday luncheon while James F. Fairman, NSPE vice-president for the Eastern area, will preside over the Saturday noon day meal. Mr. Stanford is vice-president of Robert and Company of Atlanta, Ga., while Mr. Fairman is vice-president of Consolidated Edison Co. of New York, with offices in New York City.

These features, together with those which were reported in the November AMERICAN ENGINEER will be staged in Buffalo. A few surprises for the visiting delegates are also being planned.

NSPE Representative Submits Report On International "Bill of Rights"

Representatives of approximately 150 private organizations, including the National Society of Professional Engineers, met on October 31, 1947, in the auditorium of the New State Department Building in Washington, D. C. to discuss with government officials the Proposed International Declaration on Human Rights.

NSPE was represented at the meeting by Dr. Hale Sutherland of Lehigh University. The Conference was called by the State Department, in accordance with Articles of the United Nations Charter. Its purpose was to obtain the advice and suggestions of a representative section of the American public on the preliminary draft of the International Declaration which was developed by the drafting committee of the United Nation's Human Rights Commission. As a representative, Dr. Sutherland was in a splendid position to speak for professional engineers.

Specific Answers Sought

Following the discussion, the representatives present were asked to submit answers to five specific questions. Dr. Sutherland's letter containing both the questions and his answers follows:

To: Department of State, Office of Public Affairs, Division of Public Liaison.

From: Hale Sutherland, Representative, Attending the October 31st Conference on the Proposed International Declaration on Human Rights, National Society of Professional Engineers.

Subject: Questions on Implementation.

At the conference on October 31st attended by some 150 representatives of American private organizations advice was requested as to proper implementation of the International Declaration of Human Rights by a series of questions under five headings. Since there has been no opportunity for my organization to consider these matters it should be stated at once that the brief answers herewith represent only my own personal opinions and in no way constitute any official action of the NSPE. It is a heartening example of the democratic processes in action when a high governmental agency seeks, as here, a sample of public opinion through a group of private organizations and their representatives.

Question 1. "Do you feel that it is desirable to have a convention on human rights in addition to a declaration?"

In view of the rather portentious character of any action under Chapter VII of U. N. Charter and the limitations of Article 2(7) it would seem advisable that some implementation by convention be agreed upon. Action here would be in way of informing world opinion primarily and police action or coercion would not be thrust into an inflamed situation prematurely.

Convention's Provisions

Question 2. "What provisions should go into such a convention?"

I would like to see the convention cover as completely the whole range and detail of the Declaration as may be possible of acceptance by the Member States.

Question 3. "Should governments operating under a federal-state system be immune from international inquiry and action in matters under state rather than federal jurisdiction?"

No.

Question 4. "How far would I be willing to permit United Nations inquiry in my own state, assuming these United States to be bound by such a convention?"

I would favor full and free inspection and investigation by a United Nation agency for all complaints of any violation of human rights.

Enforcement Measures

Question 5. "What measures of enforcement would you advocate for a convention?"

Most surely the convention should contain, as suggested, provisions for finding a breach of human rights, power to recommend remedy, redress, proper conduct, and the power to censure. I am most skeptical of the advisability of anything further at this time in the life of United Nations. The important thing now is the esablishment of standards and the winning of all minds and hearts to agreement in these matters. This is a matter of world opinion and opinion can be won but not coerced. However where inquiry discloses the rise of another Nazi tyranny, that is, where the complaints pyramid and the whole national scene is involved, it would seem that then the whole matter moves into the range of Chapter VII and the Convention should so state.

Sincerely,

Hale Sutherland

As will be noted, Dr. Sutherland expressed these views, not as official NSPE opinion, but as his personal reaction.

His official report to NSPE President Ritchie Lawrie is as follows:

Mr. Ritchie Lawrie, Jr., President,
National Society of Professional Engineers.

Dear Mr. President,

On October 31st last, representatives of approximately 150 American private organizations met in the Auditorium of the State Department Building in Washington, D. C. to discuss informally with Government officials the proposed International Bill of Rights, a preliminary draft of which had been prepared by a committee of the United Nations Human Rights Commission. The purpose of the meeting was to secure the advice and suggestions of a representative section of the American public on a document whose potential importance we all recognize from our own experience with the Bill of Rights in the American Constitution. The advices voiced at this Conference become part of the working papers of Mrs. Eleanor Roosevelt, United States Representative on the Commission.

Gen. Marshall Speaks

The meeting was addressed briefly by General Marshall, the Secretary of State. Unable to be present, Mrs. Roosevelt sent a letter of greeting.

Much of the discussion of the meeting related to the problem of implementing the Declaration in such manner that it may be effective in safeguarding human rights all over the world. At the first meeting of the Commission the United States proposed that this implementing be accomplished by the adoption by the Member States of the United Nations

of a convention covering as wide a range of specific rights as might be mutually agreed upon, which Convention would operate to make violation of such rights subject to intervention by United Nations in some fashion. A series of five questions relative to the way in which such a Convention might operate and be regarded in our own country was given those in attendance with request for a considered reply within a few days. I enclose copy of the replies which I have made (See letter reproduced above) and the statement therewith that such opinion was purely personal and not in any way the opinion of the NSPE. These replies will be considered by our Representative and we hope will assist her in her preparation for the next meeting of the Human Rights Commission in Geneva, Switzerland the first of next December.

Complete minutes of the proceedings were impossible for your delegate and my brief notes enable me to present to you only a few of the points made which struck me as being really significant.

Objection Raised

Objection was cogently made to one article (Article 3) that as framed this completely nullifies the whole Declaration, since the obedience to law enjoined is necessarily to the domestic law of the land and the law of a tyrant and the social obligations which he may assert as necessary may not at all conform to the standard in the minds of the framers of the Declaration. This difficulty appears again and again throughout the document. There seemed to be general concurrence that means must be found to enable the citizen to break out from the straight jacket of domestic law.

One suggestion made was that the right of petition to United Nations without resulting penalty should be included.

Another suggestion, brought forward in view of the same difficulty, was that either concentration camps should be forbidden or that a statement should be included listing the minimum rights at the least of those in protective custody. (It was held that Art. 5 is ineffective here on account of the basic difficulty relative to domestic law which may permit the most outrageous coercive measures.)

A second criticism of the Declaration was that the rights of aliens in the courts of a land are not covered and safeguarded.

It was pointed out that with the passage of time the rights specifically mentioned in the Declaration might fail to cover new rights which may come of formulation and recognition in a changing society and that, accordingly, a blanket or catch-all clause should be added asserting, for example, that rights not listed but recognized as valid by the general concensus of democratic peoples shall be assumed as intended by the Declaration.

The question was raised as to whether family rights are adequately protected.

It was pointed out that the rise of radio broadcasting makes it needful to mention the right of freedom of the broadcaster and the right of the listener and the viewer in case of television.

The representative of a religious group suggested an article running somewhat as follows: It is recognized that freedom of conscience is a right in time of war as well as in time of peace and none shall be compelled to act contrary to his conscience in war time. (This was generally well received.)

A well known lobbyist for social reform insisted that in some way there be indicated that there must be no discrimination by U. N. against Member States having socialized industry, and that the right of the people to the land be recognized. (This last is the well known Henry George Single Tax doctrine.)

Finally one representative urged that an article be added declaring that each article of the Declaration is to be considered not only as a unit but also as an organic part of the whole document.

As an example of the democratic process in operation, the seeking of citizen advice by a high governmental agency, this was a most significant gathering, a phenomenon tending in some measure to counteract the alarm many feel on account of the alleged dictatorial trend of our National Government. The privilege of attending as your delegate was much appreciated by myself.

Respectfully submitted,

Hale Sutherland

Member Pennsylvania Society of Professional Engineers

It will be noted that no official expression of opinion on the procedure being followed has as yet been made. Any comments which NSPE members may have should be directed to Dr. Sutherland, Lehigh University.

Canadian Architects Law Suit Reported

Dean C. R. Young of the University of Toronto in this issue of The AMERICAN ENGINEER writes about the registration and professional problems of engineers in Canada. (See Page 8). A mere reading of his article will reveal that in many respects they are similar to problems found in the United States, particularly as to historical development.

The analogy between the problems of the profession in Canada and its problems in the United States does not stop here, according to many observers who have commented on the recently reported dispute between engineers and architects in Quebec.

With respect to this action, The Engineering Journal, publication of the Engineering Institute of Canada, reported:

King's Court Decision

"Recently the Court of King's Bench of the Province of Quebec handed down a decision in the appeal of Brian R. Perry, M.E.I.C., against the judgment of the Superior Court which had ruled at the request of the Architects Association of Quebec that he had contravened the architects' act when he designed and supervised the construction of an industrial building. The appeal judges upheld the decision of the lower court."

Distinction between engineering and architecture has been the subject of some correspondence with NSPE recently, and therefore, it is interesting to note this Canadian case, according to some prominent Washington Engineers.

In commenting on the Court action, the Engineering Journal said:

"The architects have gained nothing nor have the engineers lost anything, except that between them they have spent about $15,000.00. It has been a useless, stupid and shameful exhibition. As the *Engineering News Record* says it has been "a jurisdictional dispute that should cause all reputable architects to blush with shame.

"At no time was the public interest considered. It was admitted on all sides that Mr. Perry was competent to do the work and in fact had done an excellent job. It was simply a question of who had the legal right to do it. It was for all the world just like a jurisdictional dispute between two trade unions—of which we have all seen too much."

Canadian Registration Analogy

(*Continued from Page 9*)

Long-seated resistances to the new and broader concept of engineering as a learned profession, with all that the term connotes, still confront those who labor for its realization. One can scarcely wonder at their existence when it is remembered that in English-speaking countries up to a century and a quarter ago men prepared themselves for engineering tasks and responsibilities in the same manner as they had from the dawn of history. They learned by trial and error, by observation, practice, and apprenticeship. The English millwrights—all honor to their sturdy enterprise and resourcefulness — were but uneducated workmen with little or no thought of a higher status. James Brindley, the man who developed the great inland waterways system of Britain, could scarcely read or write and was content to receive throughout his amazing career no more than the wages of a skilled mechanic. George Stephenson and Thomas Telford began similarly, but although achieving more exalted heights of professional prestige, they and those that followed them during many succeeding years in Britain regarded apprenticeship as the only satisfactory means by which one could become an engineer.

The things worth knowing being therefore conceived of those that could only be acquired by operations in the shop and field, it is not strange that little thought was given to the more polite forms of learning, such as are prized by men who excel in other professions or in public life. The concept of engineering as no more than a superior grade persisted and remnants of it still remain to plague those that strive for something more.

Ignorance of what men in other walks of life think or do has bred narrow intolerance in many of those who cling to the old attitudes. Knowing little of others who live and work in spheres very different from their own, they are disposed to belittle and suspect them as the south Englanders did of the men of the north in the days before the improvement of transportation made contacts easy and frequent.

Even in these days which we euphemistically term enlightened there are many young men seeking entry to the universities that think only of the mastery of an intricate trade, the acquisition of a few scientific or technical tricks that will make them superior to their less practical fellows and give them an easy and secure livelihood unattended by any obligation to pull their own weight in the social, humanistic and political efforts of their time.

Some Suggested Measures

While unstimulated awareness of the superior advantages of the well-educated man as contrasted with one of narrow outlook may bring eventual but slow remedy, educational institutions and professional organizations cannot allow the matter to rest there. Positive and definite action needs to be taken.

On their part the professional schools of engineering should revise upward their standards of admission, at least insofar as general educational subjects are concerned. For example, a bare pass or credit in English ought not to be accepted. A man who is so deficient in the use of this mother tongue as to be wrong as often as he is right in the use or appreciation of the spoken or written word is a sorry prospect for professional eminence. He may be a clever deviser of mechanisms, and an accurate predictor of what they will do, but completely ineffective as a member of a society that depends for its progress on the co-operation of educated men dealing with situations on which their personal specialties have little bearing.

The professional associations, or licensing bodies, have likewise an opportunity for significant and constructive action. Let them scrutinize with particular care the general educational qualifications of every applicant for admission, whether he comes by way of a university or directly from the shop, office, or field. Examinations for those who are not university graduates might very appropriately include a paper in English beyond the level of the last grade in high school.

Preach Professionalism

Seasoned members of the profession should lose no opportunity of preaching sound professionalism in season and out. Its leaders should be invited to pass on to students the results of their experience and observation in functioning as responsible citizens and not merely as accomplished technologists. Young men in college will accept with avidity advice of this type "from outside" while they will listen incredulously to a member of the regular staff who tells them the same thing—and perhaps rather better.

REAL PRIDE IN PROFESSIONALISM

To the Secretary:

As per my order for an emblem, the same was received in good order 10-24-47.
(Date)

Very truly yours,

(Name)

Whenever NSPE National Headquarters in Washington sends out an emblem to an NSPE member, it wants to be most certain that the pin or charm reaches the member promptly and in good condition. Therefore, a self-addressed postal card is sent along, asking the member to sign it and drop it in the mail. This gives Washington a check on the post office.

The above reproduction shows one such postal card which was returned to the Washington Office recently. It illustrates the pride which one member of NSPE takes in wearing his new pin, the badge of his profession, for all to see.

Legislative Committee's Monthly Report

Dear Fellow Member:

The time has come for your Legislative Committee Chairman to say his final piece through this column; to "sing his swan song" as it were, and to close his monthly column with whatever words of wisdom he can muster from his experiences.

It has been your Chairman's pleasure to have served the National Society in this capacity for three years. These three years have been momentous in the growth of NSPE and equally significant from the standpoint of the development of our Legislative program. We have come a long way, but there is still a long challenging stretch of road ahead. In my report to the Board of Directors of NSPE at the Buffalo meeting this December I state:

"The past two years in particular have been years of development; years of assembling the means and fashioning the tools for use; years of trying out the means and seeking to strengthen them to overcome weakness. If all that we have attempted has not been fully successful, our success has surely outweighed our failure. And if we have profited from our failures we have been more than successful."

Future Development

In this, my last opportunity to report to you officially as Legislative Chairman, I would like to expand on that statement, and more particularly leave with you a few observations for our future development. During the past two years we have been attempting through various means, by trial and error, to formulate a more definite Legislative Policy. We have utilized referendums, expressions of opinion through correspondence, bulletins, reports, and direct contacts and conferences. All of this has been directed toward one end; to formulate a Legislative Policy that will truly express the desires and aspirations of our membership.

Out of this experience we have formulated a concrete Draft of a Legislative Policy to guide us for the coming year. This draft seeks to represent the wishes of the membership insofar as we have been able to obtain the views of the membership. It has been "cussed" and discussed in correspondence and at meetings. A revised draft will be presented to the Board of Directors for their decision. At this time we cannot say what the result will be. But regardless of the Board's action we are on the right road in this connection.

Looking ahead, your Chairman believes that the greatest contribution that can be made toward furthering our Legislative activity will be the contribution of the individual member. No matter what successes the Legislative Committee may enjoy, if it does not know and does not therefore represent the thinking of the individual member, it has not achieved true success. But if it does not know the desires of the membership the Legislative Committee cannot possibly execute their wishes.

As I look back it appears that an improvement in our Legislative activities must, of course, start with the individual. The individual view must, however, be crystallized and sharpened through study and particularly through discussion with fellow members. The logical place for this phase to develop is at the local level, the Chapter meeting. Here, in a relatively small group, opinions can be exchanged, new thoughts developed and common experiences utilized to resolve legislative questions. The distribution of our Legislative Bulletin is being expanded as rapidly as possible and at the present time it is available to every Chapter secretary. It should be used to greater effect. Perhaps it would be desirable, subject to local conditions, to set aside specific meetings of the Chapter, for a discussion of legislative problems. Native ingenuity will provide many other means of fostering discussion of legislative matters. But whatever the method, if we can achieve a clear-cut analysis of the problems at the Chapter level we have made a great stride forward.

RAY M. FULLER

Where does your State Society Legislative Chairman fit into this picture? He cannot, of course, attend every Chapter meeting, and he cannot and should not attempt to control Chapter decisions on these problems. If the Chapters will decide these legislative questions, both specific and general, and transmit their views to the State Chairman he will then play a vital role in coordinating the various expressions and taking the lead in adopting a State Society policy. No one can say with certainty which technique should be used in this procedure. It must vary within each State Society. The important thing is that there be mechanisms developed to do the job.

Won't Work Automatically

The results of such a program will be that the National Legislative Committee will have the considered expressions of opinion from the State Societies, through the Chapters; representing in the final analysis the thinking of the individual member. No such system, or any other, will work automatically. It will depend upon what you, the individual, do about it, and as in all other branches of human activity, the result obtained will depend upon the effort put into it. New problems will develop and new flaws will make themselves known. But we are on the right road and with the cooperation of all we will advance our Legislative work for the common good.

Your Chairman cannot close his remarks here without expressing his thanks to all who have contributed unselfishly their aid and counsel these past three years. Your new Legislative Committee Chairman will face difficult problems but if he receives the whole hearted cooperation of all of us, as I know he will, he will lead our legislative activity to greater heights, and through that activity will advance the cause of Professional Engineering.

Cordially yours,

Ray M. Fuller

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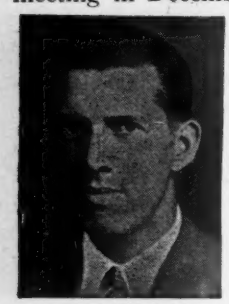
National and State Society News

NEWS FROM THE WASHINGTON OFFICE

It is customary for the officers of the Society to make Annual Reports to the Board of Directors at their meeting in December. Your Executive Director has just finished his report of the activities of the Washington Staff for 1947. While it by no means tells the complete story of the activities and progress of NSPE, there are some pertinent facts which are of interest to all members. This report will be reproduced and available at the Annual Meeting. A limited number of extra copies will be available and any member desiring a copy may receive one by writing the Washington Office.



Paul H. Robbins

A review of the membership over the past 2 years, which this report contains, is interesting. On November 30, 1945, NSPE had a total of 10,754 members. One year later, November 30, 1946, it had increased its membership to a figure of 13,928. On November 30, 1947 the membership totaled more than 17,000 showing an increase of over 6,250 members in 2 years, or nearly 60%.

Expanding Membership

Keeping pace with this expansion in membership has been expansion of all the activities of NSPE. Committee reports presented to the Board at Buffalo indicate the extent of our present plans. These reports will be carried in detail in the succeeding issues of the AMERICAN ENGINEER in order that the membership may know what its society is doing in advancing the status of the profession.

On November 15th the newly appointed Committee on the Problems of the Young Engineer met in New York. This committee, over half of whose members represent young engineers, was created out of the desires of these young engineers for an opportunity to secure the advice and help of our Society in the professional solution of problems they face. Anyone attending this meeting was impressed with the sincere desire of these men to study these problems and find solutions compatible with high professional standards which will advance the status of engineers. The members of this committee are reported elsewhere in this issue. (See page 12).

For some time the Washington Office has been receiving correspondence resulting from discussions among engineers on the recognition of engineering in the definition of "professional" in the Wage and Hour Act. Opportunity to present our thinking on this presents itself next January when we will appear before the Administrator to give testimony. This is but one of many opportunities where the engineering profession must make itself heard.

Tau Beta Pi Convention

In his capacity as Director of Fellowships the Executive Director attended the Annual Convention of Tau Beta Pi held in New York recently. One was impressed by the sincerity of the representatives of the 78 engineering colleges who attended. One also noted the interest and keen questioning with which these undergraduates talked about professional status, recognition and other non-technical yet professional subjects. They were eager to learn more about the professional status of the profession they were about to enter. One received the impression that answering the questions of these students is a field where so much work can be done by our State Societies and local chapters. Charles E. Wilson, President of General Electric, in his address at the Banquet stressed the need for engineers to apply their keen thinking to the problems of the world. NSPE through the programs of its state societies, the studies of its Educational Committee and its general program is endeavoring to make a better profession for these young men to enter. But we must, at the same time, keep them informed of their responsibilities as they enter engineering.

The Washingon Staff is now making plans to attend the Annual Meeting. It is sincerely hoped that we shall have the opportunity of greeting a good many of the members of NSPE in Buffalo.

Illinois

A new Illinois Society Chapter has recently been established at Ambraw, which is in the east central part of the state. The chapter is now fully operative, its constitution having

Coming Events To Remember

National Meetings

December 4, 5 and 6. NSPE Annual Convention, Statler Hotel, Buffalo, N. Y.

State Meetings

December 13, Indiana Society annual meeting, Claypool Hotel, Indianapolis.

December 13, Georgia Society annual meeting, Atlanta.

January 9 and 10, Pennsylvania Society annual meeting, Brunswick Hotel, Lancaster.

January 15 and 16, Texas Society annual meeting, Plaza Hotel, San Antonio.

January 16 and 17, Oklahoma Society annual meeting, Mayo Hotel, Tulsa.

January 23 and 24, Wisconsin Society annual meeting, Pfister Hotel, Milwaukee.

January 29 30 and 31, Illinois Society annual meeting, Joliet.

February 11 and 12, Minnesota Association annual meeting, Lowry Hotel, St. Paul.

March 18, 19, and 20, Ohio Society annual meeting, Netherland Plaza Hotel, Cincinati.

April 9 and 10, New Jersey Society annual convention, Essex House, Newark.

been approved by the Board of Directors.

* * *

The Illinois Society is planning publication of state roster. It is expected that the booklet will be pocket size and consequently, a valuable guide and reference manual.

* * *

Arhur M. Kaindl has been elected to honorary membership in the Illinois Society. He is a long time member of the state group and was, for many sessions, the only professional engineer member of the state legislature. During his service in the legislature he made many specific and important contributions to legislation affecting engineers, particularly by sponsoring and supporting legislation leading to registration.

* * *

The 65th General Assembly of the Illinois State Legislature enacted many laws of interest to professional engineers. Some of them are summarized, as follows:

The Illinois Professional Engineering Act, the Land Surveyors Act, the Architectural Act and the Structural Engineering Act were all amended in such a way that a certificate of registration which expired while the registrant was in military service can be restored without examination or payment of fees, if within two (now one) years after termination of military service the registrant makes application therefor.

An amendment to Section 15 of the Illinois Professional Engineering Act permits a person who at time of the effective date of the Act was on active duty with the Armed Forces of the United States to apply for a license thereunder within 30 months (now one year) after termination of such military service, provided he was a practicing professional engineer at the time of entering such service.

S. J. R. 34 provides that the Legislature's Road and Bridge Committees be directed to hold joint hearings and conferences to investigate the reasons for the shortage of engineering personnel in the Division of Highways, and to investigate the salaries paid by the Division of Highways in comparison with those paid by other employers of similar talent and occupation. Upon the facts thus shown, to make a report for the guidance of the Governor and other State Officers in taking necessary action to insure an adequate staff for the Division of Highways.

Other bills passed affect engineers indirectly, such as appropriations for the University of Illinois, and for research by the State Scientific Surveys, amendments to the motor fuel tax law and authorization for municipalities with a population of 500,000 or over to establish public airports.

Massachusetts

The Metropolitan (Boston) Chapter held its Fall meeting on October 29, 1947 at the Boston City Club with an attendance of 100 members and guests. The speaker was Paul H. Robbins, Executive Director of the National Society. Mr. Robbins, whose postgraduate days were spent at M. I. T., expressed his pleasure at returning to the "Land of the Bean and the Cod," and gave an extremely interesting as well as colorful resume of the problems of the professional engineer and the progress being made by the National Society in overcoming them. He made particular reference to national and state legislation.

It was the unanimous opinion of those present that the National Society made a ten-strike when they signed up Mr. Robbins, and it is suggested that other chapters give their members the opportunity of meeting him and learning first-hand of the work of the National Society.

Mr. William F. Ryan, nominee for National Vice President representing the Northeastern Area, who introduced Mr. Robbins, suggested that it should be an important function of the chapters to initiate and pass on to the National Society problems which require action at the national level.

* * *

The next meeting of the Metropolitan Chapter will be held at the Boston City Club on December 2 when the speaker will be Thomas E. McCormick, Executive Director of the Boston City Planning Board and recognized authority on city planning. Mr. McCormick, a Harvard graduate in Civil Engineering, is a member of the Metropolitan Chapter, M.S.P.E., American Institute of Planners and the Municipal Technical Engineering Association of Boston and has been a member of the Boston City Planning Board for the past 16 years.

Minnesota

S. L. Stole, prominent NSPE member in Minnesota, has been named to the five man Municipal Housing and Redevelopment Authority for Minneapolis by Mayor Hubert Humphrey.

This new agency is charged with the responsibility of obtaining adequate housing for the inhabitants of Minneapolis speedily and efficiently.

The appointment is viewed in Minnesota, according to correspondence from there, not only as a tribute to Mr. Stolte as an outstanding professional engineer, but also as a recognition of the importance of the Minnesota Association of which Mr. Stolte has long been a member.

The Minnesota Association has long campaigned for the appointment of representative engineers to important policy making and legislative positions in local communities, in the state government and in the federal service. Mr. Stolte's appointment is viewed by the Association as tangible evidence that its campaign is bearing fruit. It will serve as an example to both the state and federal agencies in employing engineers in the future.

New Jersey

An interesting test case is now being tried in the Courts of New Jersey. A member of NJSPE has been accused by the State Board of Architects (complainant) of doing architectural work in that he prepared plans and specifications for a two-story dwelling and also a doctor's office. The case is being prosecuted by the Attorney General's office and it is taking the form of a quasi-criminal case inasmuch as punitive measures are provided for violations. Expert witnesses have already appeared for both sides but, because of a busy court calendar, the continuance of the case is carried over to January 13, 1948. The results should be of great interest to Professional Engineers not only in New Jersey but throughout the country.

* * *

Over the past six or 7 years the New Jersey Society at its semi- and annual meetings has intermittently approved amendments to its By-Laws. These have now been consolidated into a new revision of the State Constitution and By-Laws. To effectuate it, a formal signatorial ceremony was conducted in Newark on November 14 at which time each Chapter representative received an NSPE seal as a memento of the occasion.

* * *

Early plans are being made for New Jersey's 1948 Convention. The Passaic County Chapter will act as host and Engr. William Fairhurst of

that Chapter will be General Chairman. A prospectus for exhibitors will be in the mails before the first of the year.

* * *

President Jones has appointed a special committee chaired by Engr. Frederick Kraissl to meet with a similar committee representing the New Jersey Chapter, American Society of Safety Engineers. They will study the ramifications of a program to establish qualifications for Safety Engineers to become eligible to apply for a P.E.'s license.

* * *

Some time ago the New Jersey Civil Service Commission announced an examination for the position of Superintendent of Public Works at Asbury Park, New Jersey, which included the functions of Municipal Engineer. New Jersey laws stipulate such a Municipal Engineer should be a P.E. However, in the published qualifications it was not required that the applicant be a P.E. State Headquarters made frequent contacts with proper officials and the net result is that a republication of qualifications was made, specifically calling for a P.E. and now one of our members who successfully passed the examination has the position in question.

New York

Frederick H. Zurmuhlen (Richmond), presently a Trustee and three-term past president of the NYSSPE, on October 22 was sworn in as Commissioner of Public Works for New York City. Characteristic of his concern for the Society, Mr. Zurmuhlen made certain that newspapers would include his association with NYSSPE in reporting his assumption of the new post.

The New York Times featured a three-column picture of the swearing-in performed by Mayor O'Dwyer, together with a comprehensive biography which included the following information: Graduate Manhattan College with degrees in civil engineering, engineering and architecture; professional engineer since 1922; architect since 1926; Assistant State Engineer of Public Works Administration 1933-35; chief engineer, Reconstruction Finance Corporation, 1935-1937; consulting engineer to U. S.-New York World Fair Commission, 1937-1941. Supervised engineering work on $86,000,000 Army base at Trinidad while chief engineer of the George F. Driscoll Co. and the Walsh Construction Co., 1941-1943. Supervised engineering work on $6,000,000 Brownsville Housing project and planned and constructed a number of important buildings in South American countries since 1943 as chief engineer for the Driscoll organization. From 1923 to 1941, Mr. Zurmuhlen was also associated with the firm of Sibley & Fetherstone, architects, and since 1941, has been a member of the firm of Corry & Zurmuhlen (Pat Corry, our Treasurer).

The appointment of "Fred" to this important post is sincerely applauded by his fellow-members of this Society who know that his future activities will result in great benefit to the City of New York, and thus add new lustre to the profession of engineering. Congratulations to the new Commissioner and to Mayor O'Dwyer for a splendid choice and recognition of abilities which long have been demonstrated in the activities of NYSSPE.

Pennsylvania

Elmer A. Holbrook, past president of NSPE, was the main speaker at the Harrisburgh Chapter meeting on November 17. His topic was "Interrelationships of Professional Engineers.

Mr. Holbrook's talk was enthusiastically received. It stimulated a lively discussion.

West Virginia

After consideration of many matters vital to the engineering profession of West Virginia, and after the nomination of Dr. Charles E. Lawall, assistant to Vice-president Walter J. Touhey, Chesapeake and Ohio Railway Company, as president along with a capable group of supporting officers and directors, the West Virginia Society of Professional Engineers concluded its 14th annual convention Oct. 11 after a 3-day session at Clarksburg. The voting on the officers will be by letter ballot at a later date, with any other names that might be placed in nomination as provided in the Constitution and By-laws.

More than 155 engineers and their ladies enjoyed the banquet, which in every respect reflected credit on the local committees, representing the chapters at Clarksburg, Elkins, Fairmont, and Morgantown as joint hosts.

In the aggressive work of the various committees, and in the deliberations of the various business sessions, convincing evidence was shown of the growing interest in engineering activities in West Virginia. Both membership and finances of the Society were shown to be at an all-time high.

Wisconsin

Mr. M. H. Blakey, consulting engineer, led the discussion of a newly proposed code of ethics at a meeting of the Milwaukee Chapter of the Wisconsin Society of Professional Engineers at the City Club on Friday, November 14 at 8 P. M.

Mr. Blakey is chairman of the chapter's Ethics and Practice Committee which during the year has developed the proposed code. Copies will be available for discussion.

Steinman Offers Chapters Advice

David B. Steinman, past president of NSPE and author of the Builders of the Bridge has submitted the following suggestions for local chapter meetings:

Meetings of local Chapters of Professional Engineers should be designed to advance the objectives of the organization. Among these objectives are the improvement of cooperation and mutual understanding and respect with public officials, legislators, other professions, and other organizations. For the furtherance of these objectives, the following program and meeting suggestions are recommended:

1. Invite your city and county public officials to be guests or speakers at your meetings.

2. Invite your State and National Senators and Representatives to be guests or speakers at your meetings.

3. Invite doctors, lawyers, and representatives of other professions to be guests or speakers at your meetings.

4. Invite the industries in your community to furnish programs for your meetings.

5. Invite your municipal or county planning authorities to present their programs and problems at your meetings.

6. Invite your local newspaper editors to be guests or speakers at your meetings.

7. Invite other organizations (professional, technical, and civic) to participate in joint meetings on programs of mutual interest.

What's New For Engineers

Requests for further information concerning any item mentioned under this heading will be promptly referred to the manufacturer. It would be appreciated if inquiries be addressed on professional or company letterhead.

Send Inquiries Direct to American Engineer, 1359 Connecticut Ave., Washington, D. C.

BENCH TYPE FURNACE*

Model 1-B is a completely redesigned and improved small oven furnace intended for use in small tool shops and other shops not requiring elaborate or expensive heat treating equipment. The furnace is of heavy gauge welded sheet with reinforcements to provide a rigid furnace structure. Heavy cast sections are used at all points subjected to heat such as door, door frame, top casting and flue outlets. The entire unit has been streamlined and fully enclosed to protect parts against damage and also to prevent workmen from coming in contact with any of the electrical or mechanical parts. Primarily designed for use where low pressure air is available, combustion equipment includes burner and McKee proportional mixer, which provides single valve temperature control. Temperature range is 1400 to 1600 deg. F. It is only necessary to connect the gas supply and attach the cord from the motor to the nearest lamp socket. This type of bench furnace is especially suitable for intermittent use in hardening punches, dies and small tool or brazing applications where space is limited.

For further information address American Engineer, Reference No. 1200.

HIGH SPEED GRINDER*

The new VB2 high speed grinder in both pedestal and bench mounted types are available for all types of grinding and polishing work. The grinder has a ¼ HP motor that delivers 18,000 rpm; takes 115 volts on either AC or DC; operates equally well in a vertical or horizontal position and delivers an even flow of power for light hand work. Reducing collet gives range of tools up to 1-inch diameter wheels. The new grinder comes equipped with a high speed, cool running flexible shaft.

For further information address American Engineer, Reference No. 1201.

HYDRAULIC POWER UNIT*

Production of improved types of standardized hydraulic power units for use in conjunction with hydraulic cylinders and other hydraulically operated equipment is announced by this corporation. Distinguished outwardly by streamlined appearance and compact arrangement, the new units provide for any required pump capacities from 1 g.p.m. up, and for pressures to 2,000 psi or more. Standard equipment includes pump, pressure relief and adjusting valve, flexible pump-motor coupling, and hydraulic pressure gauge. Engineering data on hydraulic power applications is contained in a recently published manual. The designing engineers have also compiled extensive data on hydraulic power circuits and hook-ups which is available for working out installations.

For further information address American Engineer, Reference No. 1202.

RAM TYPE MILLER*

This company announces a new ram type milling machine which is especially applicable for the tool room, pattern shop, die and mold shop, experimental laboratory, repair shop and general purpose milling. This versatile machine features an adjustable cutter head and moveable ram which permits horizontal, vertical as well as angular milling, with standard milling cutters and conventional milling practices. Because most work can be carried through to completion without change in set-ups, this miller reduces idle machine operator time. The moveable ram in combination with the saddle and knee adjustment increases the versatility and work range of the miller. Power feed is provided for table longitudinal travel. Table feeds and spindle speeds are controlled by quick change levers which provide for nine feeds ranging from .6 inches perm inute to 16 inches per minute. Nine spindle speeds from 95 rpm to 2000 rpm are easily selected by two levels. Specifications include—table size, 37″ x 9½″, table travel 18″; saddle cross feed 8″; knee vertical feed 17″.

For further information address American Engineer, Reference No. 1203.

CENTERLESS GRINDER-POLISHER*

A new addition to the line of grinding and polishing equipment is now in production. Known as the OD-1 cylinder grinder-polisher for rods, bars and tubes, it has several different features. The machine is a centerless machine using coated abrasive belts for grinding and polishing. For stock removal it will remove up to .005″ per pass on ferrous metals and up to .010″ on nonferrous. Work supports will handle ½″ bars up to 18 feet long and one inch bars up to 8 feet long. The endless abrasive belt is 4″ wide, 60″ long, and may be operated dry or wet with coolant. Wet operation is recommended as it gives better finish, does not discolor work from heat and gives a higher production with longer belt life. Two methods of feeding are employed; through feed, and end feed. The through feed is generally used and is accomplished by swinging the regulating wheel on its horizontal axis from zero to 12°. The rate of feed can be varied from zero to 18 feet per minute. Although just announced, the machine is not new, in that the first model was exhibited at the National Metal Congress in Cleveland in 1944. This machine has given more than three years of satisfactory service. It is now in production and on about four weeks' delivery basis.

For further information address American Engineer, Reference No. 1204.

CAM BEARING SERIES*

A new cam yoke roller bearing is the latest development in the full type roller bearing design originated in this country by McGill fifteen years ago. A special bulletin, No. CY-47, offers engineering and applicational data for this cam follower type bearing built with an inner race to increase adaptability where mounting by the conventional cam follower stud is undesirable. Shaft sizes range from .250 for the ¾″ to 1.250 for the 4″, the largest stock size. Internal construction of the bearing is similar to the cam follower having an extra heavy outer race section and a full complement of small diameter rounded end rollers. Their full useable elngth provides maximum load carrying capacity which with sturdy roller end plates permanently secured to inner ring shoulders guarantees a beaing unit capable of rugged service and precision performance.

For further information address American Engineer, Reference No. 1205.

* Items so marked are furnished by the editorial staff of the magazine *Production Equipment.*

FRICTION CLUTCH SCREW DRIVERS*

Two new air screw drivers, models 7037 and 7039, for No. 4 and No. 8 wood or machine screws, have been added to the line of industrial air tools. The tools incorporate a new friction clutch attachment, using ¼" hex shank bits or ¼" hex adapter with square drive for nut setting. The new friction clutch attachment is designed to permit a greater travel range of the adjusting nut, which controls the tension of the clutch spring. To attain a required tension, merely adjust this nut, and screws or nuts will be driven to the desired torque requirements. The angle of the friction jaws is such that the jaws will slip freely when the adjustment or tension is at a minimum or maximum. Model 7037, has a lever throttle. A sister model is equipped with a pistol grip. Over-all length of the tool is 8¼", and weighs 1¾ lbs. Speed is adjustable to 1800 rpm. The tools are furnished complete with 8 feet of ¼" hose and fittings; a speed control; one finder, and three bits of specified size.

For further information address American Engineer, Reference No. 1206.

NEW ELECTRIC FURNACE*

This new furnace, capable of continuous operation at 2000°F., also provides highly accurate temperature control down to 300°F. Suitable for heat treating of small parts, tools and dies, this furnace heats from cold to 2000°F. in one and one half hours. Only half this time is required after overnight shutdown. Rapid and uniform heating of the 8" x 14" chamber is assured by six embedded-type heating elements, including one in the door. The power capacity is 4650 watts. Since only 2½ kw. are required to maintain 2000°F., ample capacity is available for heating whatever work is charged. The furnace draws 20.2 amps at 230 volts. The model VK-5, is equipped with the new selective power modifier. The modifier unit consists of a synchronous motor driven, cam-operated switch which can be selectively set to maintain the power from 5% to 100% of capacity; a dial control, relay and pilot light, all mounted integrally on the front panel below the door. Either a wall mounted pyrometer or control panel may be employed with the furnace. Enclosed and self-contained, the latter is completely wired with electronic-operated pyrometer, breaker-type switch and fuses. When mounted with the panel and stand assembly, this furnace can be installed or moved anywhere by connecting two line wires.

For further information address American Engineer, Reference No. 1207.

NEW MULTIPLE OILER*

A company carrying a line of oiling systems and lubricating devices has announced a new multiple oiler. Capable of solving the oiling problems in a wide variety of situations, the new system is designed to meet the huge post war demand for a central point of oiling for remote bearings. It is a centralized unit made up of a transparent reservoir of unbreakable plastic with a non-spill valve which greatly simplifies refilling, and a main reservoir from which copper tubes lead to the various remote oiling points. In the main reservoir, the oil is maintained at an even level, insuring a well regulated abundance of oil to the individual bearing. By the same principle overflow and flooding of bearings is impossible. A unique feature is the inclusion of a series of valves—one for each of the leads—permitting the flow to each bearing to be adjusted individually or turned completely on or off. Thus the system may serve more than one machine, or it may serve complex units with independently worikng parts.

For further information address American Engineer, Reference No. 1208.

HEAVY DUTY CLEANERS*

A line of six heavy duty vacuum cleaners for industrial and commercial use, a complete set of industrial vacuum cleaning tools and two heavy duty blowers are now being shipped by this concern. The new cleaners are designed to handle major cleaning operations, as they apply to maintenance in factories, office buildings, and other similar establishments. Although each cleaner is designed for a specific type of industrial or commercial cleaning, the six models are basically similar in design and use. All are high powered machines, incorporating Universal type AC-DC motors. Maximum filtering area is provided to assure greatest cleaning efficiency. Weight of the portable and strongly built machines, is held to a minimum.

For further information address American Engineer, Reference No. 1209.

MEDIUM DUTY DRILL HEADS*

To help satisfy the demand for adjustable, multiple drill-heads, this manufacturer has introduced a standard line of medium duty heads. Like the light duty type they are available in standard models having from 2 to 6 spindles. Heads with more than 6 spindles may be built to special order. The medium heavy duty model will drill holes up to 23/32" in cast iron as compared to 11/32" for the light

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duty type. This heavier model has No. 2 Morse taper spindles with verticle adjustment as standard equipment. It has a gear ratio of 1 to 1 so that a lead screw may be used in tapping operations. Minimum center-to-center location is 1⅝". Diameters of bolt circles vary from 1-29/32" minimum to 14-43/64" maximum. Like the lighter machine, the medium duty type is entirely gear driven, and embodies the same operating features. Each drill revolves completely around two different centers, both having 1,333" radius. Each drill can be located anywhere within a 5.332" circle and all circles overlap, permitting an infinite variety of hole patterns. A locking template is provided for each set-up, thus assuring rigid set-ups with no variation.

For further information address American Engineer, Reference No. 1210.

CABINET FOR ELECTRIC COUNTERS*

Centralized installation of electric counters is greatly facilitated by a panel mounting cabinet. Each unit is designed to house and enclose five counting units. The counters are connected and installed from the front making it practical to completely assemble and wire the cabinet before counting devices are installed. Equipped with terminal screws for easy connection, the panel also provides knockouts for conduit connections and bolts. Cabinet capacity for one hundred counters requires a space only 56 inches wide, 40 inches high and 5½ inches deep. Actuated by electric impulses from a switch, relay or photo electric unit operated by motions or objects being counted, a group of counters mounted in these cabinets can be arranged to maintain a continuous count of production or material movement throughout the largest plant.

For further information address American Engineer, Reference No. 1211.

1500 TON PRESS*

Recently announced is the introduction of a new 1500 ton straight side hydraulic press. Standing 38 feet high, the new press measures over 19 feet in length and 10 feet in width. The stroke is 48" with 88¾" of daylight. Bed area is 96" by 144", and the total weight is about 500,000 lbs. The die set alone weighs 74,000 lbs. From an engineering standpoint, the press features fast advance to the work with automatic shift to full pressure stroke, thereby eliminating high-speed impact. Reversal is automatic on pressure or distance; also full electrical push-button control is provided for automatic operation with control stations for four operators. The first press of this type completed will be used in the forming of heavy parts for tractors. It is equipped with cushions in the bed, having a capacity of 500 tons and a stroke of 24".

For further information address American Engineer, Reference No. 1212.

HYDRAULIC POWER FEED*

A new development of a hydraulic power feed for sliding head model drill presses has been announced by this company. The new hydraulic power feed combines high efficiency with extreme simplicity of design, a requirement demanded by the trade. The new feature will not only be incorporated into the concern's new presses, but will be aavilable for easy attachment to existing models. The new attachment makes the machine fully automatic, instead of semi-automatic as it is at present. It is provided with convenient adjustments for obtaining various rates of feed. Units equipped with this feed may be used for honing, lapping, tapping and drilling operations. In the automatic position, the unit provides reciprocation of action to the spindle. Unit was a feature of the Production and Machine Tool Show at Chicago last month.

For further information address American Engineer, Reference No. 1213.

AUTOMATIC WRENCH*

A new automatic wrench, consisting of a variable torque motor operating a retractable spindle, is available. The wrench is made in two models with maximum torque capacity of 4000 inch lbs., and 6000 inch lbs., respectively. A wheel on the side of the housing enables the operator to select and hold any desired torque from 0 to the maximum capacity of the unit. The downward movement of a hand control level engagves the wrench spindle in the chuck pinion. Left and right movements of the same lever operate a momentary switch which energizes the motor for gripping or releasing the workpiece. This is a particular advantage where the type of workpiece restricts the movement of chuck jaws within close limits. In four jaw

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chucking, each jaw may be advanced or retracted and the movement held within close limits. The wrench is not restricted to any present limits but will move the chuck jaws to the full extent of their travel. Overall dimensions for model 4M, 4000 inch lbs. torque capacity are: length 22⅝ inches, diameter 7½ inches; for the model 6M, 6000 inch lbs. torque capacity, length is 25-13/16 inches, diameter 9 inches. Model 4M is recommended for use with chucks up to 12 inch diameter, and model 6M, up to 30 inches in diameter. Models are provided with motors of 220 or 440 volts, 60 cycle, 3 phase.

For further information address American Engineer, Reference No. 1214.

NEW PROFILE GRINDER*

The new, bench-type, high speed profile grinder introduced by this company early this year, has a number of features which provide definite operating advantages in the tool room, machine shop, or on production grinding operations. Designed specifically for the precision grinding of interior and exterior profiles, curved, odd and irregular surfaces, it permits a high degree of accuracy in the finishing of hardened steel parts for tools, dies, jigs, and fixtures. The functional work table may be tilted 15° in any direction. Desired angle of inclination is indicated by graduated dial and pointer. In addition the table has a 3¼" vertical adjustment actuated by a convenient crank handle, and is secured at the desired height by a hand knob. The built in diamond dresser is a great time saver, as it is instantly ready to keep wheels free and fast, in true cutting condition. No cleaning or assembling of loose parts is required preparatory to wheel dressing. After the diamond, which slides in a sleeve, is brought close to the wheel the holder is locked in position. The diamond is then "fed" to the wheel by rotating the sleeve which is threaded for that purpose.

For further information address American Engineer, Reference No. 1215.

WIRE ROPE HOOK-END*

This manufacturer of widely used line of wire rope, strand and cable connector products, are introducing a new hook-end fitting which they claim will replace unsafe and makeshift methods now employed in many industries. The illustration tells a complete story in itself. Applications for this type of hook include: winches, cranes, hoists, derricks, draw works and other similar equipment. Hooks may be secured safely and quickly by the wire rope ends by means of the patented connector which is built as an integral part of the hook.

For further information address American Engineer, Reference No. 1216.

PRECISION GEAR PUMP*

Here is a newly designed line of hydraulic gear pumps, precision built for increased efficiency. Called the "Cub-line" pumps, the new units are ideal for hydraulic applications in such fields as machine tools, farm equipment, construction and materials handling machinery. Available in 10, 15 and 20 gallon-per-minute capacities, this line of pumps have an overall efficiency rating of 90% or better. The new pumps are reversible, and operate equally efficiently in either direction. Floating bronze wear plates at either side of the gears divide clearance into four extremely narrow slits, thus providing high frictional rsistance to flow recirculation. The pumps are precision built with complete interchangeability of parts. All internal parts are machined to close tolerances; shafts are alloy steel, hardened and ground; cases aer cast from alloy iron. A rotary type shaft seal guarantees long service life without the need for frequent attention. The pumps are dimensioned so that discharge can be piped at full flow from either front or side.

For further information address American Engineer, Reference No. 1217.

4 WAY AIR VALVE*

This manufacturer is now producing a new four-way air valve known as the Air-Miser. This valve was designed with a by-pass port in the bronze disc which allows half of the compressed air used in the power stroke of a double acting air cylinder, to be used to return the piston. This is the air that normally is exhausted into the atmosphere in conventional types of valves. The valve by-passes the air used on the power stroke of a cylinder to the opposite end of the cylinder, through an accumulator, which stores 50% of the exhausted air and uses that air to return the piston to starting position. Utilizing this exhausted air reduces the load and volume consumed from the air compressor by 50%. This valve has an auxiliary port that can be used, should more air be needed to return the piston. This gives the operator a conventional four way valve, plus the by-pass feature. Prompt delivery is offered on these valves and complete descriptive literature is available on request.

For further information address American Engineer, Reference No. 1218.

FINE PITCH GEAR MACHINE*

Manufacturers of instruments, fractional horsepower drives, cameras and watches will be interested in the new fine pitch gear generator developed by this company. Solving the difficult problems ordinarily involved in the production of small fine pitch gears to precision tolerances, the machine was first publicly displayed and demonstrated at the Machine Tool Show at the Dodge Plant in Chicago, last month. Employing a unique full generating process, this gear generator combines the outstanding advantages of both the shaping and hobbing methods of gear production. Designed primarily for producing fine pitch involute gears, either spur or helical, the machine will generate any form producted by conventional methods Extreme tool simplication contributes largely to the accuracy of finished work and to economy of operation. The new machine will produce gears varying from the smallest practical diameter up to three inches over a 30 to 200 pitch range. Adaptable to semi or fully automatic magazine feeding, it will handle blanks or stacks of blanks up to ¾ inch thick.

For further information address American Engineer, Reference No. 1219.

AIR-HYDRAULIC PRESS*

A new air-hydraulic press for all types of operations is illustrated here. This press, designed with an entirely different operating principle, offers advantages in higher efficiency. The power mechanism has only one moving part which floats on a cushion of oil providing smoother, more easily controlled action. Air consumption is reduced to approximately half the usual consumption for other presses of equal capacity. The mechanism is contained within the housing. A double acting hydraulic cylinder built as an integral part of the air piston permits reduction in oil pressures of approximately fifty percent over conventional operating pressures. The elimination of many moving parts and sealing by means of standard "O" rings reduces maintenance costs to a

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new low, according to the manufacturer. A self-bleeding action of the mechanism is so constructed that the press can be started with the hydraulic sysem full of air and it will bleed itself completely. This press has a fabricated steel housing instead of a cast type, which makes the entire unit more easily adaptable to special requirements. The adaptability of the press is also increased by the fact that indexing, stripping, and other operations requiring power can be performed without auxiliary units. Available in either two and one-half or five ton models with either two or five inch stroke.

For further information address American Engineer, Reference No. 1220.

GAUGE FOR CORROSION SERVICE*

A new pressure gauge for corrosion service has been recently placed on the market. Known as the type 105 Mastergauge, this unit is particularly recommended for use with the ofllowing materials: acetic acid, alcohol, (all types), sodium acid sulphate, sodium chloride, oxalic acid, carbon tetrachloride, sulphite solution, milk of lime, boric acid, sugar solution, tannic acid, citric acid, alum solutions, and hydrogen sulphide. This type gauge features a lathe turned beryllium copper bourdon tube, with beryllium copper locktite cones screwed at the tip and socket. The tip and socket, made from brass stock, have a special bronzed bushed movement with bronze pinion and arbor. Also, as standard equipment, is a recalibrator. This device corrects the gauge in case it is knocked out of adjustment through improper handling.

For further information address American Engineer, Reference No. 1221.

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, as amended by the Acts of March 3, 1933, and July 2, 1946 of AMERICAN ENGINEER published monthly at Baltimore, Md. for October 1, 1947.

District of Columbia, City of Washington:

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Russell Allen, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the AMERICAN ENGINEER and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily, weekly, semiweekly or triweekly newspaper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the act of August 24, 1912, as amended by the acts of March 3, 1933, and July 2, 1946 (section 537, Postal Laws and Regulations), printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, National Society of Professional Engineers, Washington, D. C.; Editor, Thomas J. McBreen, Washington, D. C.; Managing editor, None; Business manager, Russell Allen, Washington, D. C.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

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(signed) Russell Allen, Business manager

Sworn to and subscribed before me this 23rd day of September, 1947.

(Seal) William W. Cobey

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